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ABSTRACT

This study explored the changing nature of post-secondary students' situational demands and how students of different ages cope with those demands. The study proceeded by tracking episodes of demands and coping throughout an academic year with a sample of 56 students enrolled at the Southern Alberta Institute of Technology (Canada) in 2-year academic programs. Students completed four coping inventories at four designated points during the academic year. Results produced no significant differences in the types of demands reported by students of different ages. Among findings were: (1) direct entry students, ages 18-19, made greater use of emotion-focused and disengagement strategies and showed greater coping stability across time suggesting that they appraised their inability to alter demand characteristics and resorted to emotional regulation; (2) students who rated coping efforts as less effective used more emotional venting and disengagement coping; (3) students who rated their coping strategies as highly effective tended to use more problem-focused coping and were able to maintain positive appraisals of demand characteristics; and (4) students age 20 or older used more suppression of competing activities, an active coping strategy important for coping with competing role demands. (Contains 42 references.) (JB)

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Age Influences on the Demands and Coping Strategies of Post-Secondary Students

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Age Influences on the Demands and Coping Strategies of Post-Secondary Students

There is general agreement that how people cope with demanding situations is an important causal factor in people's stressful experiences (Hiebert, 1988, Lazarus & Folkman, 1984; Magnusson, 1982). Situational demands can be quite high, but if people perceive themselves as coping effectively with the demands, little stress will be experienced. Conversely, regardless of the nature or intensity of demands, poor coping contributes to the experience of stress. Therefore, coping plays an important role in people's experience of stress and those who fail to develop appropriate coping resources are at risk for developing medical and/or psychological problems.(Compas, 1987; Patterson & McCubbin, 1986; Stark, Spirito, Williams, & Guevremont, 1989)

The stability of coping has been investigated from the perspective of age and developmental influences. Advocates of the dispositional perspective argue that personality characteristics developed early in life influence coping efforts and remain stable and unchanging throughout the adult years (Costa & McCrae, 1983; McCrae & Costa, 1986). Thus coping is seen as relatively stable across people and across time. On the other hand, advocates of the situational perspective consider contextual properties throughout the life-span as more important than chronological age in determining coping processes (Folkman & Lazarus, 1980; 1984); Folkman, Lazarus, Pimley, & Novacek, 1987; Lazarus & DeLongis, 1983; Lazarus & Folkman, 1984; McCrae, 1982).From a situational perspective, apparent coping stability is due to stable demands, but generally speaking, variability in coping is the norm because people tend to adjust their coping manner to address the nature of the situation they are facing.

In several ways, post-secondary students are ideal candidates for investigating the relationship between age and coping. Post-secondary students deal with diverse and changing types of demands which may require different applications of coping strategies. Many of the problems for which post-secondary students seek counselling assistance are stress-related, suggesting that coping resources have become overtaxed (Arthur & Hiebert, 1993; Catanzaro & Greenwood, 1994). Shifting personal and academic demands over the school year (Grandy, Westerman, Mitchell, & Lupo, 1984) allow for investigation of the extent to which students of different ages change their coping efforts across time in order to accommodate changes in demands and academic success (Jorgensen & Dusek, 1990).

Post-secondary students comprise a wide age range from adolescent to late adulthood, each comprising unique constellations of demands. For adolescents entering post-secondary school, demanding situations may result from the physical move to a new situation and the demands accompanying that new situation in addition to those which occur as a result of the developmental transition from adolescence to adulthood (Jorgensen & Dusek, 1990; Rieschl & Hirsch, 1989). Most adolescents in their first year of post-secondary school, experience some degree of social and personal-emotional adjustment problems (Dixon, Heppner, & Anderson, 1991; Fisher & Hood, 1987; Lapsley, Rice, & Shadid, 1989). In contrast, the majority of adult students who pursue post-secondary education are in the midst of a career transition (Aslanian & Brickell, 1980). In addition to life circumstances that propel them towards higher education, adults must also deal with the balancing student roles with other adult demands (Bauer & Mott, 1990; Brundage & Mackeracher, 1980).

This study addressed the changing nature of situational demands and the nature of post-secondary students attempts to cope with demands through tracking episodes of demands and coping throughout an academic year. . The influence of age on coping was a central concern. It was hoped that the results of this investigation will provide information for counsellors and other student services professionals to assist students with their perceived stress and coping efforts in the first year of a post-secondary program.

Method

The sample consisted of students enrolled at the Southern Alberta Institute of Technology in 2 year academic programs having at least a 70/30 gender ratio and grade 12 entrance requirements. A stratified random sampling procedure was used to select 56 volunteer participants in each age group of direct entry (ages 18-19), others students (age 20-24) and mature students (age 25 and older). Complete data were obtained for 94 participants.

The experimental design was a 2 (gender) X 3 (age) X 4 (time) repeated measures design. At four designated points during the academic year, students were asked to complete the: COPE (Carver, Scheier, & Weintraub, 1989), Beck Depression Inventory (Beck, Rush, Shaw, & Emery, 1979), Beck Anxiety Inventory, (Beck, Brown, Epstein, & Steer, 1988), and Inventory of Student Demands, a researcher constructed open-ended questionnaire to collect qualitative information concerning students' coping efforts.(see Arthur, Hiebert, Waters, & Johannson, 1992). These are described below.

Dependent Measures

COPE. The COPE is a theoretically-based measure of coping with stress (Carver et al.,1989), consisting of 60 Likert items contributing to15 subscales. Five subscales measure aspects of problem-focused coping (Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking

Instrumental Social Support), five subscales measure aspects of emotion-focused coping (Seeking Emotional Social Support, Positive Reinterpretation and Growth, Acceptance, Denial and Turning to Religion) and three subscales address coping by disengagement (Focusing on and Venting of Emotions, Behavioral Disengagement, and Mental Disengagement). The two remaining subscales (Alcohol and Drug Use, Humour) are exploratory.

THe COPE has good psychometric support. Cronbach alpha reliability coefficients range from .45 to .92, with only mental disengagement falling below .6 (Carver, 1991). Test-retest reliability (8 week interval) range from .46 to .86. Low correlations between the COPE scales suggest that they are relatively independent of each other.

Convergent and discriminate validity has been demonstrated by linking coping strategies to a variety of personality qualities (Carver et al., 1989). For example, Active Coping and Planning (positive coping strategies) correlate positively with Optimism (r=.32, .25), Control (r=.21, .14), Self-esteem (r=.27, .22), and Hardiness (r=.20, .17). On the other hand, Denial and Behaviour Disengagement (negative coping strategies) correlate inversely with Optimism (r=-.27, -.37) and Control (r=-.19, -.20). Correlations between the COPE scales and a social desirability scale ranged from -.27 to .17, while correlations with measures of monitoring (r=-.16 to .20) and blunting (r=-.09 to .09) were low.

Beck Depression Inventory. The revised version of the Beck Depression Inventory (BDI) is a 21 item Likert-type self-report questionnaire (Beck et al., 1979). Beck, Steer, and Garbin (1988) report an internal consistency mean coefficient alpha of .86 for psychiatric subjects and .81 for nonpsychiatric subjects. Correlations for test-retest stability over 1 week range from .48 to .86 for psychiatric subjects and from .60 to .83 for nonpsychiatric subjects. The BDI is widely used to discriminate between psychiatric and nonpsychiatric

subjects. In a comparison study of undergraduate students, Lightfoot and Oliver (1985) found an internal consistency mean coefficient alpha of .87, test-retest reliability measured over 2 weeks was .90, concurrent validity using the original BDI as the criterion was .94, and the correlation between the level of depression measured by the two instruments was .94.

Beck Anxiety Inventory. The Beck Anxiety Inventory (BAI) was developed to reliably distinguish between symptoms of anxiety and depression in psychiatric patients (Beck, Brown, et al., 1988). The format, and scoring are similar to the BDI. Internal consistency (Cronbach alpha) is .92 and test-retest reliability (1 week interval) is .75. Item-total correlations range from .30 to .71.

Inventory of Student Demands. The Inventory of Students Demands (ISD) is a researcher-constructed questionnaire based on the theoretical premises of stress and coping described by Lazarus and Folkman (1984). The questionnaire consists of a series of open-ended and Likert questions. The open-ended questions require students to list and rank five current demands and for the most demanding to indicate ; (a) length of time experiencing the demand, (b) what it was about the situation they found demanding, (c) perceived consequences of the demand, (d) the main way they deal with the demand, (e) reasons for dealing with the demand in that way, (f) length of time dealing with the demand in that way, (g) how well coping efforts worked, (h) criteria used to determine the effectiveness of coping efforts, (i) desired results of coping, (j) intentions for coping with the demand in the future, (k) the most demanding situation anticipated in the next month, and (l) anticipated coping strategies to deal with that demand. Where appropriate, participants are asked also to quantify their response using a 6-point Likert scale. Specifically, Participants are asked to quantify their: (a) degree of general stress, (b) degree

of stress experienced in each reported demand, (c) perceived personal control over the demanding situation, (d) coping effectiveness, and (e) confidence in coping ability. In addition, the ISD contains a list of institutional resources requiring students to indicate: (a) use of that resource, (b) usefulness of the resources used, and (c) characteristics about the resources that students found useful/not useful. At each administration, participants were asked to list up to five current demands, elaborate the top demand, and describe their current coping strategies. At the second and subsequent administrations, the top demand from each previous test time was revisited in addition to the current top demand in order to determine whether coping approaches adjusted to meet changing demands.

Results

Descriptive Results

Students as a whole ranked academic situations as the most demanding, followed by relationship and family demands, finances, and employment demands. There were no noteworthy differences in the types of demands reported by students of different age groups. In general, the demands and coping strategies used by students showed high stability across the academic year. However, the coping efforts of direct entry students, age 18-19 showed greater stability over time.

The rank order of COPE subscales revealed several interesting patterns over time. Throughout the academic year, students were most likely to use Positive Reinterpretation and Growth as a means of coping, followed by Planning, Action, Acceptance, and Suppression of Competing Activities. For the total sample there was consistency over time in the rank order of the top five ways of coping. Age subgroups had similar patterns of coping, except that students age 18-19 reported Mental Disengagement as the fifth most frequently

used way of coping at Times 1, 3, and 4. Denial, Religion, Behavioral Disengagement, and Alcohol/Drug Use were reported least frequently at all four Times.

Use of Campus Resources

Several campus resources were accessed by students when attempting to cope with their current top demand. Students age 25+ made significantly greater use of the Learning Skills Centre at Time 1, $\chi 2=15.97$, $p<.01$, and at Time 2, $\chi 2=11.50$, $p<.01$. At time 4, students age 18-19 made significantly greater use of Campus Recreation, $\chi 2=10.61$, $p<.01$. Students age 25+ made greater use of academic and personal support services in coping with their top demands whereas students age 18-19 made greater use of Campus Recreation as a coping resource.

Age Influences

To investigate the influence of age on stress and coping, a MANOVA was conducted using general stress level and the COPE subscales as dependent measures. There was a significant Age x Time interaction, $F(96,962)=1.30$, $p<.03$, with significant univariate effects for General Stress, $F(6,177)=2.11$, $p<.05$; Suppression of Competing Activities, $F(6,177)=2.31$, $p<.04$, and Venting Emotions, $F(6,177)=2.84$, $p<.01$, see Table 1

Post hoc Scheffe indicated that on General Stress, students age 18-19 had significantly lower scores than other students at Time 1 and at Time 4 students age 20-24 had significantly higher scores than students age 25+. On Suppression of Competing Activities, at Times 1 and 4 students age 25+ had significantly higher scores than students age 18-19, at Time 2 students age 20-24 had significantly higher scores than other students, and at Time 3, students age 20-24 had significantly lower scores than other students. On Venting Emotions, at Time 1 students age 18-19 had significantly higher scores than

students age 20-24, at Time 3 students age 25+ had significantly lower scores than other students, and at Time 4 students age 20-24 had significantly higher scores than other students.

Table 1

Means for Age x Time Interaction

Variable	age	n	Time 1	Time 2	Time 3	Time 4
Genstrs						
	18-19	20	2.15	2.90	2.90	3.30
	20-24	24	2.79	3.04	3.08	3.67
	25+	22	3.29	3.14	3.00	3.14
Supcomp						
	18-19	20	9.30	9.50	10.10	9.70
	20-24	24	10.04	10.46	9.29	10.30
	25+	22	10.52	9.57	10.86	10.81
Ventem						
	18-19	20	9.45	8.85	9.15	8.65
	20-24	24	8.63	8.42	9.38	9.92
	25+	22	9.10	8.86	8.00	8.83

Early in the academic year, direct entry students, age 18-19, were more likely to cope through Venting Emotions, but 20-24 year olds were more likely to use that strategy at the end of the academic year. Students age 25+ were more likely to cope through Suppression of Competing Activities at the beginning of the year and students age 20 and older showed significantly higher scores on this way of coping by the end of the year. This suggests that older students may be dealing with multiple role demands which require them to prioritize activities in order to cope with their top demands. At the beginning

of the academic year, students used coping strategies that withdrew them, actively and mentally, from the demand situation. Although stress levels peaked during the second half of the year, there was greater use of acceptance and less use of denial.

The sample as a whole reported less stress in September than the rest of the academic year, while depression was highest at the end of the year. Students were more likely to cope using Positive Reinterpretation and Growth, Acceptance and Religion at the beginning of the school year than in the second semester and more likely to cope using Suppression of Competing Activities and Seeking Social Support at the end of the year. All students decreased their use of Positive Reinterpretation and Growth in February, in comparison to the first semester, suggesting perhaps that over time, students are less able to reframe their demands as potential benefits.

Other Factors Influencing Coping

To investigate other factors potentially influence coping a series of MANCOVAs and MANOVAs were performed using these factors as classification variables. These included: perceived control over the demand, perceived confidence about implementing coping strategies, and perceived effectiveness of coping strategies. Because of cell size restrictions on the number of variables permitted in the MANCOVA, the COPE subscales were grouped into the three categories, Problem-focused coping (PCOPE), Emotion-focused coping (ECOPE) and Disengagement coping (DCOPE). (See Table 2.)

Control. The MANCOVA with Control as a covariate produced a significant main effect for Time, $F(9,734)=3.21$, $p<.01$. Subsequent univariate tests indicated a significant effect for ECOPE, $F(3,248)=4.22$, $p<.06$. Students at Times 1 and 2 had significantly higher ECOPE scores than subsequent Times. Generally, students with higher control used more action and

emotional expression coping, whereas students with lower control coped using humour.

Table 2

Means and Standard Deviations on ECOPE Scales for Covariates Control, Confidence, and Effectiveness.

Covariate	n	Time 1	Time 2	Time 3	Time 4
Control	89	45.47(6.63)	44.51(6.41)	43.43(6.31)	43.57(6.63)
Confidence	78	45.58(6.38)	44.62(6.33)	43.49(6.09)	43.09(6.38)
Effectiveness	81	45.37(6.57)	44.17(6.33)	43.14(6.31)	43.62(6.73)

Confidence. The MANCOVA with Confidence as a covariate produced a significant main effect for Time, $F(9,635)=3.61$, $p<.01$, with a significant univariate test on ECOPE, $F(3,215)=5.25$, $p<.02$. Students at Times 1 and 2 had significantly higher scores on ECOPE than subsequent Times. Generally, at Time 2 students with high confidence used more problem-focused coping whereas students with low confidence used more emotion-focused and disengagement coping. Students with high confidence age 20 and older used more Suppression of Competing Activities, and Positive Reinterpretation and Growth than students 18-19, whereas students in the latter age group with low confidence coped more through Restraint. At Time 4, students 18-19 used less Planning, but more Denial and Humour coping than students in both other age groups, and students age 25+ used more Mental Disengagement than other students. In general, students with low confidence age 18-19 used more Action, and Planning, but less Suppression of Competing Activities than other students. Students age 20 and older with high confidence used more coping through action, Planning, Suppression of Competing Activities, Seeking Social

Support - Emotional than other students. Students with low confidence ages 18-19 and 20-24 coped more through using humour than other students.

Effectiveness. The MANCOVA with the covariate Effectiveness also produced a main effect of Time, $F(9,662)=3.14$, $p<.01$, with a significant univariate test on ECOPE, $F(3,244)=3.59$, $p<.02$. Scores on ECOPE at Time 1 were significantly higher than subsequent Times and scores at Time 2 were significantly greater at Time 2 than Time 3. At Time 2, students with high coping effectiveness scores used more Positive Reinterpretation and Growth whereas students age 18-19 with low effectiveness scores used the most humour. When students rated their coping as highly effective, they used more problem-focused coping, and more Positive Reinterpretation and Growth. Students who rated their coping as less effective used more Venting Emotions, and coping through disengagement. The means and standard deviations for the significant main effects of Time for the covariates Control, Confidence, and Effectiveness are illustrated in Table 2.

Discussion

The results of this investigation produced no significant differences in the types of demands reported by students of different ages. Previous research has shown age differences in the appraisal of situational demands (Billings & Moos, 1984; Folkman & Lazarus, 1980; Jorgensen & Johnson, 1990). Perhaps the strong focus on academics in this sample obscured relationships between age and the other demands.

There were differences in the coping strategies used by students of different ages to manage their top ranked demands. Direct entry students, age 18-19, showed greater use of both emotion-focused and disengagement coping, as well as greater coping stability across time. As suggested by Folkman (1984) and Scheier et al. (1986), this group of students may be appropriately

responding to situations over which they appraise little control. However, younger students also may lack coping strategies that they believe are more effective for directly engaging in demand resolution (Kirsch, Mearns, & Catanzaro, 1990).

Similar to other studies of college students(Forsythe & Compas, 1987; Folkman & Lazarus, 985), there was evidence that younger students had a propensity towards emotion-focused coping, suggesting that they appraised their inability to alter demand characteristics and resorted to emotional regulation (Folkman & Lazarus, 1980; Hiebert, 1988). Although intended to alleviate stress, Carver et al. (1989) argue that focusing on emotions over time may exacerbate distress and distract students from active coping efforts in dealing with the demands and movement towards demand resolution. A further implication, based on studies by Cantor and Norem (1985), McCrae (1984), Pearlin and Schooler (1978) and Wheaton (1983), is that without a varied coping repertoire that includes both self and situation management strategies, younger students may lack flexibility essential to coping with demands.

Appraisals of control and confidence about attained desired coping outcomes were key factors influencing the strategies selected by students. Lack of control over situational demands was linked to higher levels of stress, the subsequent greater use of palliative coping, and less use of coping strategies that would directly impact the demand. Similarly, students who rated coping efforts as less effective used more emotional venting and disengagement coping. Students who rated their coping as highly effective tended to use more problem-focused coping and were able to maintain positive appraisals of demand characteristics. These findings are consistent with recent explanations of stress and coping which emphasize the link between appraisals

of the situation as unchangeable, the experience of stress, and coping efforts directed towards regulation of emotion (Folkman (1984); Hiebert, 1988; Lazarus & Folkman, 1984). The results underscore the importance of exploring aspects of the situation over which students perceive a lack of control, in order to determine areas where coping assistance is required. Conversely, through attending to aspects of the situation over which students feel a sense of control, coping efforts may be focused on dealing directly with demand.

Students age 20 and older used more Suppression of Competing Activities, an active coping strategy important for coping with competing role demands (Beutall & O'Hare,1987). It may be that, in comparison to direct entry students, older students have multiple roles to balance. An alternative explanation has been offered by McCrae (1982), which suggests that the additional life experience that accompanies age, students are more selective about matching the use of particular coping strategies to meet demand characteristics. The latter may explain why younger students age 18-19 were more consistent in their use of all categories of coping and used several emotion-focused and disengagement coping strategies more often students in the other age groups. According to Patterson and McCubbin's (1986) discussion of the acquisition of coping skills, the lack of experience may leave the late adolescent less flexible in coping because of limited repertoire of skills from which to access. If so, the student population comprising direct entry students age 18-19 appear to be ideal candidates for skill training in the areas of problem-solving and/or social skills in order to enhance their repertoire of coping strategies (Magnusson & Redekopp, 1992).

Counsellors and instructors in post-secondary settings work with an increasingly diverse student population (Chartrand, 1990). In addition to the younger students who face the transition from high school to college, there are

increasing numbers of adult students entering post-secondary institutes while simultaneously managing other adult demands (Aslanian & Brickell, 1980; Brundage & Mackeracher, 1980). The increase in the experience of stress over the academic year suggests that students' coping efforts were not effective in dealing with the demand and thus reducing stress. In fact, for those students experiencing academic situations as demanding, already high stress levels rise after September and are maintained through subsequent times. The stability of coping shown over time suggests that even though the coping methods chosen are not effective in dealing with demands or alleviating stress, students rely on what they are used to or what strategies are within their skill repertoire.

The results of this study raise concerns about the nature of demands perceived by post-secondary students and the sufficiency of their coping repertoires. It appears that with the additional life experience that accompanies age, students become more selective about matching their selected coping strategies to meet demand characteristics. In contrast, lack of experience may leave direct entry students less flexible in coping because of a limited repertoire of skills from which to access. Therefore, the student population comprising direct entry students age 18-19 appear to be ideal candidates for skills training in order to enhance their repertoire of coping strategies. The transition to post-secondary education appears to be characterized by a move to a new situation in which old, familiar coping strategies are inappropriate for new circumstances. Students will be most successful in managing this transition if they are assisted to learn how to recognize what it is about a situation that they find demanding and to adjust their coping efforts accordingly.

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